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Stillet says it might be finished earlier.

Though the work on the new bridge required standard construction with drill shafts, the area is not a standard site. The Apalachicola is always a flood risk. Just upstream, the U.S. Army Corps of Engineers has to open floodgates at the Jim Woodruff Lock and Dam during heavy rainfall, especially after hurricanes and tropical storms.

"The area is always subject to flooding," says Stillet. "Last year there was a late storm around the Atlanta area, and a lot of that drains into the floodplain of the Apalachicola from the Tri-River area up north—the Chattahoochee and Flint rivers.

"It's also a pristine, sensitive environment because of the floodplain," says Stillet. "In an older river like Apalachicola, you have certain geological materials from upriver. And you can't just bring in material to put in the floodplain. It has to be the same material."

DESIGN/BUILD CLEANS UP SUPERFUND SITE

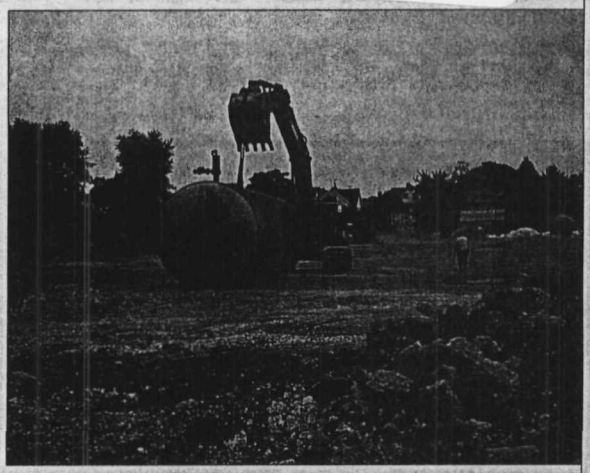
Montgomery Watson, Chicago, recently completed the remedial design and action phases at a Superfund site in Griffith, Ind. But in contrast to most other Superfund remediations, the company employed design/build to clean up the former solvent-recycling plant owned by American Service, Inc.

According to Pete Vagt, project engineer at Montgomery Watson, speed and cost were two important factors for using design/build on the project, which was initiated in 1995. "The Environmental Protection Agency was pleased with the results because we were able to finish the project a year sooner than it would have taken using conventional design-then-build methods," he says. "Construction may not have even started at this point if traditional technology had been used."

The EPA's 1992 Record of Decision for the site mandated thermal treatment of buried waste along with barrel water treatment. As part of the interim remediation measures, a barrier wall was installed using a groundwater pump-and-treat system.

Vagt says flexibility was the "primary benefit" of the $5 million project since the company did not know what the excavations would uncover. Design/build allowed the company the flexibility to refine its design rather than spend time and resources finishing a plan that might not have been compatible based on the contaminants that were found.

"We did come across changes that were needed and would have had to stop, resolve the issue and start up again if we were using conventional methodologies," says Vagt. "With this process we were able to get it done by giving the EPA 50% conceptual design and 100% final design and start building. There were plenty of meetings, but we were able to keep moving."



Fuel storage tanks were excavated from a contaminated site in Hartford, Conn., where a learning center will soon be built.

Because of the success of the initial stage, Vagt feels the EPA will consider using design/build for the full remediation of the Superfund site, scheduled to begin in 1998 at an estimated cost of $70 million. The final stage involves conducting field-scale treatability tests to evaluate whether the high-cost components of the remedy, which include excavation and low-temperature thermal desorption, are feasible.

The remediation efforts are being funded by potentially responsible parties—a consortium of major chemical, oil and manufacturing companies.

INNER-CITY CLEANUP BREAKS GROUND FOR SCHOOL SITE

A recent ground-breaking in downtown Hartford, Conn., officially launched an inner-city revitalization plan that begins with the remediation of almost 50,000 tons of soil from a 9 ½ acre site. The hazardous material is being removed from the site of a former bus garage, where a learning center is scheduled for construction in the spring.

The contamination product consists of TPH (total petroleum hydrocarbon), according to Tom RisCassi, environmental analyst at the Connecticut Department of Environmental Protection (DEP). The estimated 35,000 cu yd of soil is being removed by Earth Technologies, Inc., Hamden, Conn., which has subcontracted with the Dynamic Compaction Co. (DCC), Pine Brook, Conn. Environmental and geotechnical engineering will be performed by Haley & Aldrich (H&A), Glastonbury, Conn.

Ordinarily this type of project would involve standard backfill methods; however, H&A has specified deep dynamic compaction, in part because noncontaminated soil on the building site is loose. "After removing the contaminated soil, the new fill will need to be compacted with the existing loose fill," said Derrick Amidon, H&A's project engineer. "This is cost saving since we don't have to dig up the loose fill that was not contaminated."

According to Patrick St. Pierre, project manager at DCC, compaction will be done using a crawler crane with a boom of 100–120 ft. The steel-weighted pounder will be lifted 35–80 ft and dropped on a grid pattern on the ground. "The job should take about five or six weeks," he said.

The cleanup must restore the area to the strictest, or "residential," criteria, which apply to schools and school grounds. Because of the designated use for the site, RisCassi says the direct exposure criteria for TPH in the soil after cleanup are less than or equal to 500 parts per million.

If a free product is found in groundwater after the soil removal is complete, the Connecticut DEP will require product recovery. "The anticipated result is that there will not be any product remaining because soil at the site consists of very tight clays and the TPH is bound up in the soil matrix, preventing its migration into the groundwater," said RisCassi. "Removal of that soil is expected to satisfy cleanup of the product."

Contamination of the inner-city acreage